

Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **Richland**

Site Summary Level: **Hanford Site**

Project **RL-ER10 / Program Management and Support**

Report Number: **GEN-01b**

Print Date: **3/9/2000**

HQ ID: **0424**

General Project Information

Project Description Narratives

Purpose, Scope, and Technical Approach:

Purpose: Program Management and Support provides programmatic oversight and support to the individual Environmental Restoration Project areas, by ensuring that the requisite management systems, project infrastructure requirements and the regulatory framework are in place and properly maintained until project completion.

Scope: Workscope and reporting requirements assigned to this Project Baseline Summary (PBS) have been grouped into the following two project areas:

- ERC Program Management and Support
- RL Program Management and Support

Workscope and reporting requirements assigned to the Environmental Restoration Contractor (ERC) Program Management and Support are broken down into the following four subproject areas:

- 1 Project Technical Support
- 2 Project and Program Support
- 3 Planning and Controls
- 4 Compliance, Quality, Safety and Health

Project Technical Support - Work scope includes technology applications, environmental sciences, sample and data management, regulatory support, design engineering and field support for non-project specific equipment.

Project and Program Support - Work scope includes public involvement and community relations, project procurement, and records and document control.

Planning and Controls - Work scope includes project baseline maintenance, project services, planning and controls, ERC performance measurement, and administration of DOE-RL work requests.

Compliance, Quality, Safety and Health - Work scope includes environmental compliance, quality engineering, safety and health, and self-assessments.

RL Program Management and Support provides regulatory oversight of the ER Project, conducts assessments and special studies, and administers RL contracts and interagency agreements in support of the ER Project.

Regulatory oversight work is completed through a grant with the Washington State Department of Ecology. Regulatory oversight work includes performing technical reviews of documents, observing RL's investigative work, reviewing documentation resulting from investigations, examining

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toxicological assessments and ecological and qualitative risk assessments, conducting ecological studies (scope, sample, document review), co-reviewing proposed plans, confirming adherence to cleanup standards, evaluating Columbia River data, and examining applications for new technology.

Other work scope within RL Program Management and Support includes ongoing support for the HRA-EIS, site-wide assessments for activities that will benefit the ER Project (i.e., Safety and Security, Fire Department, Road Maintenance, etc), Benton County Sheriff, laundry and electrical support, and Natural Resource Damage Assessment Studies and Ecosystem Management.

Technical Approach: Provide programmatic oversight and support to the individual Environmental Restoration Project areas, by ensuring that the requisite management systems, project infrastructure requirements and the regulatory framework are in place and properly maintained until project completion.

Project Status in FY 2006:

The PM&S Project provides the necessary support for implementation of existing decision documents and strategies as well as evaluations to complete the remaining decision documents and to complete the scheduled remediation and D&D.

Post-2006 Project Scope:

The PM&S Project scope after FY06 will be required to support the remaining remediation, D&D, and long-term surveillance and short-term maintenance.

Project End State

Since Program Management and Support responsibilities span the ER Project, it supports the geographic goals and end states for all areas of Hanford. Refer to the individual PBSs (ER01 - ER08) for additional project detail on geographic requirements and assumptions applicable to the specific project areas. These areas of responsibility include:

- Reactors on the River
- Central Plateau
- South 600 Area
- Central Core
- Columbia River

Cost Baseline Comments:

The cost estimates for the ER Project are developed through the use of MCACES and RACER models and activity based estimates for project activities like Program Management and Support.

The contingency for outyears was developed through the use of a "Monte Carlo" analysis and selection of an acceptable level of risk.

Safety & Health Hazards:

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The Richland Environmental Restoration (ER) Project's primary responsibilities are the cleanup of past-practices waste sites, addressing the contaminated groundwater, management and integration of site-wide groundwater/vadose zone activities, and decontamination and decommissioning of surplus facilities. In 1989 the Hanford Site Federal Facility Agreement and Consent Order (TPA) was signed by EPA, Ecology, and DOE. This agreement is the primary driver for essentially all of ERC's remediation and D&D activities.

This PBS addresses ES&H and mission components associated with the overall management and control of the Environmental Restoration (ER) Project. The ER Project can be grouped into four primary Hanford Site areas: 100, 200, 300, and the remainder of the Hanford Site. The following are brief summary descriptions of the four primary areas.

The 100 Areas, which are adjacent to the Columbia River and contain the nine surplus production reactors and ancillary facilities. The fuel elements were transported from the 300 Area to the 100 Area reactors where fuel was irradiated to produce the special nuclear materials (SNM).

The 200 Areas, which are located in the center of the Hanford Site, contain the chemical processing facilities. The irradiated fuel elements were transported from the 100 Area reactors to the chemical processing plants (canyon facilities) for SNM separation and purification.

The 300 Area, which is just north of the city of Richland and adjacent to the Columbia River, is the location where uranium metal was manufactured into fuel elements.

The remainder of the Hanford Site, the 1100 and 600 Areas, was used for a variety of activities but in general had very limited role in the production or the waste disposal activities.

PM&S is responsible for overall ER project management. This responsibility includes: Project Technical Support (i.e., environmental sciences, design engineering, etc.); Project and Program Support (i.e., public involvement and community relations, records management, procurement, etc.); Planning and controls (i.e., TPA support, PBS preparation, overhead and rate formulation, project controls, etc.); and Quality Environmental Safety and Health Support (i.e., quality engineering, safety and health, assessments, environmental compliance, etc.). It also provides for regulatory oversight (CERCLA grant), special studies, and multiple small contracts and interagency agreements.

Safety & Health Work Performance:

The resources necessary to accomplish the work safely are provided through the Authorization Basis, the Site Health and Safety Program requirements, and through the resources allocated to the site's integrated safety management system in the following functional categories: radiological controls, emergency management, fire protection, industrial hygiene, industrial safety, occupation medical services, management and oversight, transportation safety, nuclear safety and management oversight.

ER resources are planned and allocated into these categories by functional responsibility through the work breakdown structure and resource loaded into the project for each fiscal year. Average hourly labor rates vary among projects based on the work scope and related skills mix.

The Emergency Preparedness functional task includes inspection of emergency facilities and equipment; emergency response team personnel training, drills and exercises relative to personnel contamination; construction accident response; maintaining/updating the current emergency plan based on

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site-specific hazards; coordination with state and local authorities and federal agencies; responses to worker injuries; and recordable occurrences and of normal events.

The Fire Protection functional task includes related inspections and testing; flammable and explosive material control; review design plans/specifications for compliance with regulations, codes, and standards; and review and concurrence of work packages.

The Industrial Hygiene functional task includes the Chemical Management system, anticipation, recognition, evaluation and control of health hazards; redesign of equipment and tasks; review and approval of work packages; design of airborne fiber wetting systems; respiratory protection standards; respiratory protection equipment supplies; substitution of less hazardous materials; written and verbal communication of real and perceived hazards; personnel protection, and asbestos fiber counts and sample analysis.

The Industrial Safety functional area includes electrical safety; machinery and pressure system safety; hoisting; rigging, and material handling, lockout/tagout; confined space controls; platform, man-lift and scaffolding usage; safe surfaces for walking and working; hand and portable power tool safety; explosives and hazardous material handling, construction safety; review of work packages; site surveillances or subcontractor review.

The Management and Oversight functional task includes S&H documentation, action tracking; S&H self assessment activities; internal audits and surveillance; external S&H program reviews; operational readiness reviews; and Voluntary Protection Program (VPP); trend analysis; lessons learned; coordination and communication with DOE, state and local authorities.

The Management, Oversight, and Reporting functional task includes the coordination of project environmental protection plans, documentation and control, information management, compliance and corrective action tracking, appraisals and self assessments and general environmental monitoring and coordination.

The Occupational Medical Services functional task includes medical scheduling, labor and industries, and OSHA reporting; oversight of the Site Occupational Medical provider; hazardous worker or asbestos worker pre/post-job medical screening coordination, tracking; and case management.

The Nuclear Safety functional task includes providing direction for the implementation of DOE Orders and Standards related to nuclear safety. In addition, the functional group assists the projects in the development, implementation, and oversight of the safety analysis process.

The Radiation Protection functional task includes radiation monitoring equipment and procedures for radiation controls, oversight of personnel and facilities, radiation control monitoring, interlocks, instrumentation for shielding for radiation-generating devices; equipment and procedures used to minimize or mitigate external exposures; and personnel dosimetry, bioassay program, and radiation-exposure records.

The Transportation Safety functional task includes the activities required to ensure safe packaging and transportation of asbestos, radioactive and hazardous materials, and approval of D.O.T. shippers and container documentation. NOTE: The amount of funding made available for this PBS in any fiscal year will determine the work that will be performed, which will, in turn, be a basis for adjustment in the associated S&H requirements.

PBS Comments:

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The PM&S provides critical engineering, environmental, cultural, regulatory, sample & data management, safety & health, quality assurance, environmental compliance and project planning and control support required for the execution of the overall ER Project. These activities are required by DOE Orders and the TPA. Without this support, the ER Project would not be able to accomplish the assigned mission.

Baseline Validation Narrative:

Baseline validation by Team Associates for DOE.

Validation Report - Richland Environmental Restoration Project FY 1996 Baseline Validation, May 1996.

The DOE requested an independent contractor, Team Associates, to perform a validation of the Richland Environmental Restoration Project. This validation was a follow up of the validation performed for the FY 1995 Baseline. Estimate models with near-term implementation schedules and total project summary costs were reviewed. The validation was broken down into three distinct efforts consistent with the validation objectives.

- 1) An in-depth review of MCACES models provided by DOE was performed
- 2) A review of near-term schedules for 100 BC and 300 FF areas to evaluate reasonableness and feasibility of achievement.
- 3) A top down assessment of the cost estimating process for consistency of approach to identify opportunities for improvement.

General PBS Information

Project Validated? Yes **Date Validated:** 5/31/1996

Has Headquarters reviewed and approved project? Yes

Date Project was Added: 12/1/1997

Baseline Submission Date:

FEDPLAN Project? Yes

Drivers:	CERCLA	RCRA	DNFSB	AEA	UMTRCA	State	DOE Orders	Other
	Y	Y						

Project Identification Information

DOE Project Manager: S.N. Balone

DOE Project Manager Phone Number: 509-376-0236

DOE Project Manager Fax Number: 509-376-0726

DOE Project Manager e-mail address: steven_n_balone@rl.gov

Is this a High Visibility Project (Y/N):

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Planning Section

Baseline Costs (in thousands of dollars)

	1997-2006 Total	2007-2070 Total	1997-2070 Total	1997	Actual 1997	1998	Actual 1998	1999	2000	2001	2002	2003	2004	2005	2006	
PBS Baseline (current year dollars)	452,110	2,494,586	2,946,696	45,423	39,041	36,388	29,533	32,441	33,603	35,343	48,452	54,476	56,032	55,175	54,777	
PBS Baseline (constant 1999 dollars)	415,017	1,316,134	1,731,151	45,423	39,041	36,388	29,533	32,441	32,720	33,509	44,687	48,874	48,853	46,841	45,281	
PBS EM Baseline (current year dollars)	452,110	2,494,586	2,946,696	45,423	39,041	36,388	29,533	32,441	33,603	35,343	48,452	54,476	56,032	55,175	54,777	
PBS EM Baseline (constant 1999 dollars)	415,017	1,316,134	1,731,151	45,423	39,041	36,388	29,533	32,441	32,720	33,509	44,687	48,874	48,853	46,841	45,281	
	2007	2008	2009	2010	2011- 2015	2016- 2020	2021- 2025	2026- 2030	2031- 2035	2036- 2040	2041- 2045	2046- 2050	2051- 2055	2056- 2060	2061- 2065	2066- 2070
PBS Baseline (current year dollars)	58,218	61,935	66,019	68,293	346,235	363,209	408,006	469,178	230,308	220,233	202,952	0				
PBS Baseline (constant 1999 dollars)	46,860	48,541	50,382	50,747	237,685	218,241	214,583	215,979	92,797	77,670	62,649	0				
PBS EM Baseline (current year dollars)	58,218	61,935	66,019	68,293	346,235	363,209	408,006	469,178	230,308	220,233	202,952	0				
PBS EM Baseline (constant 1999 dollars)	46,860	48,541	50,382	50,747	237,685	218,241	214,583	215,979	92,797	77,670	62,649	0				

Baseline Escalation Rates

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
0.00%	0.00%	0.00%	2.70%	2.70%	2.80%	2.80%	2.90%	2.70%	2.70%	2.70%	2.70%	2.70%

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2010	2011-2015	2016-2020	2021-2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050	2051-2055	2056-2060	2061-2065	2066-2070
2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%			

Project Reconciliation

Project Completion Date Changes:

Previously Projected End Date of Project: 9/30/2044

Current Projected End Date of Project: 9/30/2044

Explanation of Project Completion Date Difference (if applicable):

Project Cost Estimates (in thousands of dollars)

Previously Estimated Lifecycle Cost (1997 - 2070, 1998 Dollars):	1,684,272	Actual 1997 Cost:	39,041	Actual 1998 Cost:	29,533
Previously Estimated Lifecycle Cost of Project (1999 - 2070, 1998 Dollars):	1,615,698	Inflation Adjustment (2.7% to convert 1998 to 1999 dollars):			43,624
Previously Estimated Lifecycle Cost (1999 - 2070, 1999 Dollars):	1,659,322				

Project Cost Changes

Cost Adjustments Reconciliation Narratives

Cost Change Due to Scope Deletions (-):

Cost Reductions Due to Efficiencies (-):

Cost Associated with New Scope (+):

Cost Growth Associated with Scope Previously Reported (+):

Cost Reductions Due to Science & Technology Efficiencies (-):

Subtotal: 1,659,322

Additional Amount to Reconcile (+): -9,982

Current Estimated Lifecycle Cost (1999 - 2070, 1999 Dollars): 1,649,340

Milestones

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Milestone/Activity	Field Milestone Code	Original Date	Baseline Date	Legal Date	Forecast Date	Actual Date	EA	DNFSB	Mgmt. Commit.	Key Decision	Intersite
Begin ER Program Mgmt and Support Project	PBS-97-033		2/28/1997								
PBS Mission Completion	PBS-MC-033		9/30/2044								
PBS Project End	PBS-PE-033		9/30/2044								

Milestones - Part II

Milestone/Activity	Field Milestone Code	Critical Decision	Critical Closure Path	Project Start	Project End	Mission Complete	Tech Risk	Work Scope Risk	Intersite Risk	Cancelled	Milestone Description
Begin ER Program Mgmt and Support Project	PBS-97-033			Y							Administrative input to document the start of this PBS.
PBS Mission Completion	PBS-MC-033					Y					Administrative input to document the mission completion of this PBS.
PBS Project End	PBS-PE-033				Y						Administrative input to document the project end of this PBS.